

Sequence of the *Trichoderma viride* phosphoglycerate kinase gene

Gustavo H. Goldman, Raimundo Villarroel, Marc Van Montagu* and Alfredo Herrera-Estrella
Laboratorium voor Genetica, Rijksuniversiteit Gent, K.L.Ledeganckstraat 35, B-9000 Gent, Belgium

Submitted October 8, 1990

EMBL accession no. X54284

The *Trichoderma viride* *pgk* gene was isolated from a genomic library cloned in pT₃T₇lac using a synthetic oligonucleotide probe derived from the sequence of the *pgk* gene of *T. reesei* (1). Four clones were obtained and hybridized with 750-bp fragment of *T. reesei* *pgk*. Only one of the clones showed high homology using these hybridization conditions. We suggest, deduced from comparisons with other sequences of the *pgk* gene, that there are introns at nucleotide positions from 135 to 325 and from 747 to 819, respectively. The deduced amino acid sequence comparison showed a high homology with *pgk* from other species: 81% with *T. reesei* (1) and 55% with *Saccharomyces cerevisiae* (2).

ACKNOWLEDGEMENTS

The authors are indebted to Dr S. Vanhanen who gave them the 750-bp fragment of the *T. reesei* *pgk* gene. This work has been supported by a grant from the 'Vlaams Actieprogramma Biotechnologie' (174KP490). G.H.G. and A.H.-E. are indebted to the CAPES-MEC-BRAZIL and the Commission of the European Communities for a predoctoral fellowship and a training grant, respectively.

REFERENCES

1. Vanhanen, S., Penttilä, M., Lehtovaara, P. and Knowles, J. (1989) *Current Genetics* 15, 181–186.
2. Hitzeman, R.A., Hagie, F.E., Hayflick, J.S., Chen, C.Y., Seeburg, P.H. and Derynck, R. (1982) *Nucl. Acids Res.* 23, 7791–7808.

```

-50  TCTTTGCAGCGCAGTCTTGTTCGCTTACACGCCAGTATCCAGCCAAATGTCTCTCTCAACAAGCTGTCCATCACCAGCTCGACGTCAAGGGCAAG  51
      M S L S N K L S I W D V D V K G K
52  AGGCTCTGATTCGGGTGAGTCCGGATTGCCCGCCACTGCAGTGATGAAAAATGAGGGGACCAAGTTGGAGCTTTAGCATCGACGTCAAGCTCTGCT  152
      R V L I R V S P D C P
153  AGAGGAGCGCGTCGAGAAGGCTAATCTCTCGCTGGCTTTGGGCAATATGGGGATATTTGATAGCAGATGTCAGAACTTTGTTGGTCGATTGGCTGA  253
254  CTGATGTCTGTGTTTGTCCAGGTCGACTTCAACGTGCCCTCGATGAGAACCAAGACATCACCAACCCCGAGCAATTGCCGTGCCATCCCCACCACCA  354
      V D F N V P L D E M K N I W N P O R I A G A I P T I
355  AGCAGCTCTCGCAATGGCGCAAGGCTGTCTCTGATGTCCACCTCGAGCTCCCAATGGCGCTGTCAACGCCAAGTACTCCCTCAAGCTCTTGT  455
      K H A L D N G A K A V I L M S H L G R P N G A V N A K Y S L K P V V
456  CCCAAGCTGGAGGAGCTCCTTGCAAGCCCGTCACTTTGCTCCGAGCTGTGTCGGCCCCGAGGTCGAGGCCATTGTCAACAAGGCCGACAAAGGCCGCTGT  556
      P K L E E L L G K P V T F A P D C V G P E V E A I V N K A D N G A V
557  TATCTGCTGGAGACCTCCGATTCCACATTGAGAGGAGGCGAGCTCAAGGACAAAGGAGGCAACAGACCAAGGCCGACAAAGGCCAAGTTGAGGAGT  657
      I L L E M L R F H I E E E G S S K D K E G N K T K A D K A K V E E
658  TCCGCAAGGGCGTCACTGCTCTGGGCGACGTTACGTCACTAAGTGAATACTCTCTCTGCTGGAAGCTGTTTGTGTTTACATGTGGCTAATTGTG  758
      F R K G L T A L G D V Y V
759  TCGCCAATAGACGATGCTTTCGCACTGCCACCGTGCCCACTCTCCATGGTTGGCGTTGACCTGCCCGAGAAGGCCGCGGTTTCTCATGAAGAAG  859
      N D A F G T A H R A H S S M V G V D L P Q K A A G F L N K K
860  AGCTCGACTACTTCGCAAGGCTCTCGAGTCCCTCAGCGACCTTCTTGGCATCCTCGGTGGCGCAAGGCTCTGACAAGATCCAGCTCATTGACAAC  960
      E L D Y F A K A L E S P Q R P F L A I L G G A K V S D K I O L I D N
961  CTGCTTGACAAGGTCACACCCCTCATCTCTCGGTGGCATGGCTTTCACTTCAAGAAGGTCCTGGACAACCTCGCCATTGGTCACTCTCTCTCGACAA  1061
      L L D K V N T L I I C G G M A F T F K K V L D N L A I G D S L F D K
1062  GGCCTGTCGAGACCGTTCCTCAAGCTGTTGAGAAGGCCAAGGCCAAGACGTCAAGATTGTCTGCTACCGACTTCATCACCGCCGACAAAGTTCGACA  1162
      A G A E T V P K L V E K A K A K N V K I V L P T D F I T A D K F D
1163  AGGACGCCAACTGGCTCGCCACTGACAAGGACGGCATCCCCGATGGATGGATGGGCTCGACTGTGGTGACGATCCATCAAGCTGTACAAGGAGGCC  1263
      K D A N T G L A T D K D G I P D G W M G L D C G D E S I K L Y K E A
1264  ATTGACGAGGCCAAGACCATCCTGTGGAACGCCCTGCTGTCTTTGAGTGTGAGAAAGTTCGCTGGCGGCCAAGGCCACCTTGACGCTGTGCTCGA  1364
      I D E A K T I L W N G P A G V F E F E K F A G G T K A T L D A V V E
1365  GGGCTGCAAGAAGCGCAAGATTGTCTATTTGGCGTGGTGACACTGCTACCGTGGCTGCCAAGTATGGCGTCGAGGATAAGCTGAGGCCAGCTCTCACTG  1465
      G C K N G K I V I I G G G D T A T V A A K Y G V E D K L S N V S T
1466  GGTGGCGGTGCCAGCTTGAGCTGTTGGAGGGCAAGGAGCTCCCCGGTGTCACTGCTCTGTCAGTAAGTAATTCATACCCCTACTTATGGGTGCAATGA  1566
      G G A S L E L L E G K S L P G V T A L S S K
1567  GAGCGAGAGGAATAAATGATGACGGGGGATATGGCATAAAAAGTCCGCTCGGAGCACCCCAATTTTAAACGAAAAAGTATATAACATATACCACTG  1667

```

* To whom correspondence should be addressed